



The Blurb



Volume 51 Number9

Public Service Since 1949

September 2001

Everybody is heading for the MS 150 — Don't be left out!



There is still time to sign up

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The Blurb is published monthly by, and for, the members of **The PHIL-MONT MOBILE RADIO CLUB, INC.** whose purpose is to promote Amateur Radio in general, and Mobile Radio in particular. Copying and quoting is permitted with a credit line. We gladly exchange publications with other amateur radio clubs. Requests should be sent to the Editor. Subscriptions are available to non-members for \$10, addressed to the Treasurer. The club meets at 7:30 PM on the *second* non-holiday Wednesday of every month at **The Franklin Institute Science Museum**, Benjamin Franklin Parkway at 20th Street, Philadelphia. Enter from Winter Street or the parking garage on 21st street. **ALL VISITORS ARE WELCOME!** Amateur Radio License Examinations are held on the *first* non-holiday Thursday of every month at The Franklin Institute Science Museum—registration finishes at 6 p.m. doors close at 6:30 PM-*SHARP!*

CLUB INFORMATION

Mailing address: P.O. Box 88, Abington, PA 19001

Internet Web site: <http://www.phil-mont.org>

E-mail: info@phil-mont.org

2-meter repeater: 147.03 MHz p/1 91.5

70-cm repeater: 444.80 MHz (186.2 Hz PL)

Simplex: 147.51 MHz

24-hour club information at W3AA: 215-448-1139

STATIONS

W3AA - The Franklin Institute Science Museum, Philadelphia, PA - Trustee WU3I; Manager: W3STW

The club sponsors this world-class demonstration station, and welcomes all licensed amateurs to operate.

W3AA packet BBS frequency: 144.99 MHz: w3aa@w3aa.sepa.pa.usa.noam

W3AA e-mail: w3aa@phil-mont.org

W3EM - Field Day and special events station - Trustee W3VVS

W3QV - 147.03 MHz repeater - Ridge & Port Royal Avenues, Philadelphia, PA - Trustee W3BBB

OFFICERS

PRESIDENT: W3AOK, William H. Popovic, 343 Lemonte Street, Phila., Pa 19128;

215-487-9472

billpopovic@msn.com — n3fvi@w3aa.sepa.pa.usa.noam

VICE PRESIDENT: KB3IV, Ed Masarsky, 15 Poe Ave, Wyncote, Pa. 19095-2903; 215-572-5238

SECRETARY: WA3KIO, Fred Rice, 1933 Greymont ST., Phila., Pa19116-3804; 215-673-2854

e-mail: wa3kio@arrl.net

TREASURER: K2BN, Mike Tannenbaum, 545 Cardinal Drive, Dresher, PA 19025; 215-542-5991

k2bn@agtannenbaum.com packet: K2BN@w3ch.sepa.pa.usa.noam

DIRECTORS

WU3I (02); W3RM (02); W3STW (01); W3BBB (01); N3MT (01); N3XKE (02); W3WF (A)

COMMITTEES

Archives: W3IIN; **Audit:** NS3K; **Awards:** W3WF; **Blurb folding:** WB3KOJ & WB3KOH; **Budget:** K3KUD; **Directory:** WB3KOJ & W3IIM; **DX:** Open ; **Education:** W3CH; **Emerg.Coop.:** N3XKE; **Field Day:** WU3I; **Internet:** W3IIM; **Membership:** W3LEN & KE3ZY; **Net Control:** KB3IV; **Publicity:** W3RM **Program:** W3WF; **Public Service:** W3WF; **Refreshments:** W3AOK; **Repeater:** W3BBB; **Skywarn:** WX3PHI; **Special Events:** open; **Sunshine:** WU3I; **Youth:** KE3ZY; **TVI:** W3VVS; **VE Program:** ND3Q; **W3AA Trustee and Station manager,** WU3I; **Welcome:** K3CJ.

***Blurb* STAFF**

Editor: Dean M. Spare, N3TAL

903 Woodhollow Drive, Marlton, New Jersey 08053

deanspare@yahoo.com

856-810-8451

Artist: N3QIE (516th issue)

Labels and mailing: WB3KOJ & WB3KOH send address and directory changes to wb3koj@comcat.com

Deadline: To be assured of publication in the month that you want, all copy must be in the hands of the Editor by the 20th of the previous month.

Net Schedule

Thursday CW Practice Net at 20:00— 147.030MHz FM (NOT DURING JUNE, JULY AND AUGUST)

Sunday morning 2 Meter Net at 09:30 — 147.030 Mhz FM

Sunday morning “10-on-10” Net at 10:00 —28.393 Mhz SSB (+ or - for QRM)

Sunday morning 75 meter Net at 10:20 — 3.993 MHzSSB

189th Monthly Phil-Mont VE Test Session Statistics for August 2001

FIVE (5) candidates took six (6) elements. We had two (2) upgrades.

The VE team was chaired by Dusty Rhoads (ND3Q).

Members are: Jim McCloskey, NS3K; Carol Hutkin, K2BL; and Jeff Kerber, N3VE; Peter Butler, WB2B; Bob Freer, W3YLT and Steve Hoch, WU3I.

Exam Dates for the year 2001:

August 2, September 6.

VE Examination Sites

Confirm all information, in advance, with the contact person. Licensed applicants must bring the original, and one photocopy of their license. All applicants, including children, must show two other types of ID. Bring the original, and a copy of any Certificate of Successful Completion needed to prove current status. The ARRL VEC's 2001 test fee is \$10.00.

THE FRANKLIN INSTITUTE

Monthly, 1st Thursday — Dusty Rhoads, ND3Q, 215-879-0505, day, 215-448-1139 24-hours. Doors open at 6PM and close sharply at 6:30 PM.

BELLMAWR, NEW JERSEY

Diane Nafis, 856-227-6281. Testing is the third Thursday of the month at 6:30 PM. They meet at the Bellmawr Municipal Complex, Browning Rd. and Lewis Ave., one block off Black Horse Pike, Route 168.

BRISTOL, PA

George LeNoir, 215-943-4886

LEVITTOWN, PA

David L. Heller, 2125-946-1040

LINWOOD, PA (Commercial and Amateur)

TELFORD, PA

Joseph Burgess, 215-723-6697

WARMINSTER, PA

Tom Michaud, WA3TQJ, 215-343-3494

WILMINGTON, DE

Giselle Wells, 302-478-2757

AO-40 Attitude Control System Appears Functional

The commissioning of the AO-40 satellite took another giant step forward this week as ground controllers reported success in testing the spacecraft's attitude control system—the momentum wheels. AO-40 controllers hope to use the momentum—or “reaction”—wheels to aim the satellite's antennas and, eventually, its solar panels. The testing paves the way for possible deployment of the solar array and better signals on the ground.

“We can say with some caution that we have a working three-axis control system!!!” enthused AMSAT-DL President and AO-40 team member Peter Guelzow, DB2OS, in a posting to the AMSAT bulletin board. Until now, AO-40's attitude has been under “spin

control.”

The three-axis control offered by the momentum wheels will mean much more positive attitude control from the ground anywhere in the satellite's orbit.

After preliminary tests to energize the momentum wheels earlier this week, ground controllers Stacey Mills, W4SM, and James Miller, G3RUH, ran them up to more than 100 RPM Aug 16 during orbit 365 and left them at this speed for about a half-hour. Telemetry before and after the spin-up, once the solar sensors re-locked, showed that the system appeared to be working properly. The momentum wheels are designed to run at a nominal operating speed of 1000 RPM.

“More tests will be done over the next few weeks, before we will transfer the spacecraft from spin stabilization into three-axis stabilization,” Guelzow said. (ARRL)

ATLANTIC DIVISION HAMFEST

CALENDAR 2001

Sep 29+ ARA of the Southern Tier,

Stuff for Sale

Kenwood 440SAT with Astron RS35A no meters hand mike — 500.00

KDK FM 2016A/E 2M TT mike and KDK mike and manual — 75. Power supply staco RPS 8 15/1 watts output Synthesized rig Good for packet

TenTec Argonaut 505 Transciever QRP Rig — 200.00

upgraded to 509 specs (docs)

OBO with 405 Linear Amp for 50 watts output Power supplies (tentec) for both units and Tentec 247 Tuner

MFJ 941D Tuner 300 Watt tuner — 50.00

MFJ 931 Artificial ground — 40

MFJ 1621 Portable Antenna 10-40M 25.00

MFJ 260 Dry Dummy Load 15.00

For Sale By and For Phil-Mont Mobile Radio Club

Inquires Directed to KB3IV and WU3I

More Stuff for Sale

SBE 34 Trans, Ham bands, AM Electronic Keyer, EICO 717 Key, Vibroplex chrome.

3 Desk Mikes

Heath Hw 202, 2 Mtr. 6 Xtal, Mike Manual, Receiver, 3.5 to 29.5, no brand name.

Vista Reg. pwr supply 13.8V, 20 Amp

Freq. meter, Ham Baands, Triplet,

Absorption, Coil,

National Receiver, Model NC125 BC to 35MC. Manual, tubes over 100 types.

5 in Speakers, 2.

SWR meter triplet

Cable 20 ft w/ connectors
Many parts in mini-cabinets
see W3PXY, 215-968-4483

READY, SET, CHARGE

by Jim Spoonhower SEMA

(Thanks to KB3IV)

A 42-volt Electrical System and Beltless Engine Are Coming. Are We Ready? Cars and trucks are about to undergo a revolution in the design of their electrical systems. A more powerful automotive electrical system is needed to run all the fun things consumers want in their vehicles: navigational systems, DVD players, portable refrigerators, seat warmers, winches and more. Add to that power for technologies to help increase gas mileage and decrease emissions. These changes will have an impact on the performance parts and accessory segment of the auto industry.

The industry has actively studied automotive electrical-system voltages higher than the present-day standard since the 1980s. Engineers quickly recognized that the total onboard power demand will soon exceed the capabilities of current 14-volt electrical generators. Increasing the electrical system voltage from 14 to 42 volts will provide engineers with options in engine development that have not been available before. For example, in 42-volt vehicles, camshafts, water pumps, power steering, power brakes and air conditioners can be electrically controlled, which can dramatically reduce emissions and increase gas mileage. Studies have shown that fuel savings of up to 10 percent may be possible with full implementation of the 42-volt electrical system combined with the beltless engine.

It will happen more quickly than many think. Automakers will adopt 42 volt electrical systems faster than previously thought because the switch from 14-volt systems will produce substantial savings in fuel cost and a reduction in emissions, according to a study released by Standard & Poor's. The study projects that 25 to 35 per cent of the light vehicles produced in North America, Europe and Japan will have 42-volt systems by 2010. Following is a production

forecast chart based on Standard & Poor's study.

WORLDWIDE NUMBER OF 42-VOLT VEHICLES BY PRODUCTION YEAR

2002	46,000	2007	4,497,000
2003	155,000	2008	7,010,000
2004	606,000	2009	10,402,000
2005	871,000	2010	12,891,000
2006	2,823,000		

Really, the switch to 42 volts should be no big surprise. In the '50s it was apparent that the electrical system, once an after-thought part of the vehicle, was steadily becoming central. That marked the first big change—a move from six-volt systems to systems built around a 12-volt, negative-ground battery.

Then, in the '60s and '70s transistors and integrated circuits replaced vacuum tubes. For the first time radios—both in home and in car—would operate instantly, and they shrank tremendously in terms of both size and weight. Those attributes (virtually instantaneous warm-up, small size and small weight) made the migration of electronics into a number of areas of the automobile possible. Electronic engine controls and seat-belt/starter interlock systems were among the first custom integrated-circuit applications.

Once the industry proved its ability to make electronic engine controls that can not only survive the automotive environment, but also vastly outperform their mechanical predecessors, the way became clear to computerize virtually every major subsystem in the automobile.

Today's vehicles are already power hungry. From lights, horn to a starter and beyond the automotive electrical system has grown to incorporate a huge, ever-growing number of functions. In fact, power demand is growing at 4 percent a year, and we're already passing two kilowatts of requirement on many modern vehicles.

That's significant, because three kilowatts represents a sort of breaking point. At three kilowatts the belt-drive alternator becomes problematic. Alternator noise escalates to an objectionable level, and supplemental cooling becomes necessary.

Add to these problems the fact that the three-kilowatt demand level will be here before

see SEMA on page 8

W

3

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Trustee: Steve Hoch, WU3I

The International Voice of The Franklin Institute Science Museum

Hey, What happened to Summer? It seems like it was just yeasterday that it was Memorial Day and here it is Labor day already. Well, I still have not gotten to the rotor on the big Mosley Beam to see if there is a problem and if so what it is. Just too much to do and not enough time. The QSL cards that accumulated after the spring and summer have been sent and I will be there on meeting nights to check on them.

I am looking for some assistance to chronicle the 50 years of our operation from the Franklin Institute. If you have even the slightest ability to write I NEED TO HEAR FROM YOU. It is a daunting task and I cannot do it alone. We have been operating this station for 50 continous years and we should be Proud Of It.

I will attach a schedule of camp-ins when they are made available to me.

See you at the General Meeting and the MS-150
Steve WU3I

The PREZ SEZ



I hope everyone had a good summer. It will soon be the radio season, that time of year that we be spend more time indoors on the radio. Now is the time to get ready for the approaching radio season. Besides checking out your antenna farm to make sure that it will make it through the colder weather, you also might consider replacing old coax and checking ground connections. It's much more pleasant of a chore when the temperature is in the seventies.

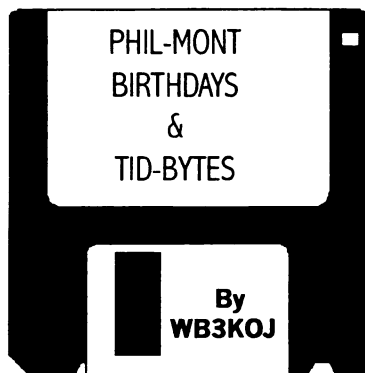
More use it or lose it news: The FCC is accepting comments on its proposals to reallocate some spectrum in the 2390 to 2400 MHz amateur segment as well as in the non-amateur 1.9 and 2.1 GHz bands for unspecified mobile and fixed services. The 2390-2400 MHz band is a primary Amateur Service allocation. The FCC has proposed including the band and others to support the introduction of advanced wireless services, including third-generation (3G) mobile systems.

If you are thinking what good is 2400, check out the following story. AMATEURS COMPLETE FIRST 24-GHZ EARTH-

MOON-EARTH QSO Here's another one for the Amateur Radio record books. On Saturday, August 18, hams in Texas and Manitoba completed the first 24-GHz Earth-Moon-Earth (EME) QSO. The contact followed by several months the first documented echoes from the moon on 2.4 GHz.

Many Hams probably thought what good is VHF when they were using 10 meter AM mobile! Please take a few minutes and tell the FCC your thoughts on losing more spectrum space..

I hope to see many of you at our first General meeting after the summer break on Wednesday September 12 at 7:30 PM. We meet at the Franklin institute on theParkway in Philadelphphia.



MEMBERSHIP STATS

122 Full paid members
14 Family members
4 Youth
2 Honorary members
0 Pending members

September Birthdays

- 01 Sol Volen- N3UBY
- 02 Greg Malone-N3FSC
- 03 Marian Fox-WA3YJR
- 05 George Walmsley- W3DO
- 08 Bill Hagerty-AA3BB
- 13 Marge Concordia (XYL WB3KAC)
- 15 Bob Freer-W3YLT
- 17 Vikye Swanson (XYL N3GLH)
- 20 Jack Spratt- N3ALW
- Michael Taraborrelli-N3MT
- 21 Marion Lester (XYL W3FWI)
- 23 Patricia Mannio (XYL WA3NSP)
- Russ Stafford- W3CH
- 26 Margie Guy XYL (N3WPE)

Upcoming Directory Supplement

With the October Blurb you will receive the 2001 Directoroy Supplement. It will contain information on new members plus corrections and additions that I have received during the last six months. If you have any changes you would like included. I must have them by September 15. In addition, the directroy will feature an "electronic mailing list" of PMRC memberswho have sent me their e-mail addresses. If you want to be listed, send your information

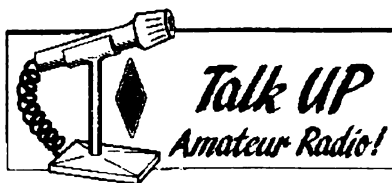
Upcoming Public Service Events

MS 150

September 29-30

Brian's Run

December 2



PUBLIC SERVICE EVENTS

Charlie Weigand, W3WF
Phone 610-323-1050
Packet: aa3p@ w3ch.#sepa.pa.usa.noam
E-mail: w3wf@aol.com

Russ Stafford, W3CH
Phone: (610)631-3401 ext. 902
Packet: w3ch@ w3ch.#sepa.pa.usa.noam

Public Service Forms Available

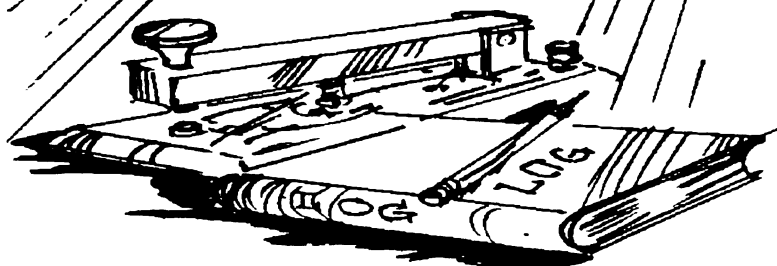
Public Service Forms are available on Line. Thanks to **Charlie, W3WF** and **Peter, KB3DFQ** you may download any of the following sign-up forms for the year 2001 public service events.

MS Walks
Chester County Bike Tour
MS 150 City to Shore 2001
the url is:

<http://metro-comm.2y.net>
(thanks to W3CH)

PHILMONT

Silent Key



John Muroff

8/2/13 - 7/1/01

Farmer Makefield

De Farmer Makefield Wall, cleaning up the barnyard we ran across a few horse apples in the bottom of the fertilizer pile that may be worthy of mention. In getting **Bradley WB3BPI**, organized (the Bed Pan Inspector) to get on the air FM has been working 20 m to Atlanta. **Fred, K1O** has graciously offered to get a 10 year old pesky HW101 up to speed with a duplicate rig to compare point to point voltages to find the components off spec.

Bill, GQD, chick a dee has one too so there has to be a way to track the bugs which have been elusive..we have plenty of tubes available. Anyway checking Intercon net on 14300 to check out propagation up and down there **Harry, K4I'TH** mobile with a bodacious signal in Atlanta and living near Brad. Harry makes a mobile work in fine shape. He can give us some tips as a Mobile Club on rigs and antennas and mounting. Turns out Harry is a new Ham and fired up with activities in several clubs most of which is the Gwinnett Amateur Radio Society. Checking QRZ.COM, GARS is one active crowd with 300 members. One clue is a female president **AF4FO, Susan**. When you want to action in the crowd the gals know how to do it.

That would be a first for PMRC in 50 years.. Nominations will be coming up soon but we can't lose **Bill, AOK** or we would lose the finest Field Day antenna tower in Pa. So how do we get more gals involved. 45 years ago FM rattled the gals cage and sure enuf we got action. What makes GARS stand out is the many and various activities including Scouts to bring on the younger ones. Brad is working with son Drew to get active. PMRC is 50 years old and shows it with **W3BBB** nee, **W3QQH** missing bashing the cricket ball around because of bends in the kilts. Also **W3PXY**, nee **W8ZPE** down the hill on the other side so far you can't find him. Under one of the fertilizer piles we found QRZ.COM which is the fountainhead of all ham knowledge. Check it out for all the clubs in the USA. also swap and shop, newsletters, and "find the ham" directory.

PMRC is well represented with the Blurb out in front with **Sam** (5000 or more carfoons) noted. What would we do with out **Sam** our carfoonist and our fearless editor **Dean**, and also **Don, KOJ** who keeps the pot boiling with the extensive membership lists and noise on the repeater.

When you pull up the Gwinnett Gazette we have to take a back seat with all their activities..14 pages mailed out and also emailed. Down load 5 minutes with 115,200. If you have T1 or T3, about 5 seconds. FM is out at the end of the line still has to stretch the string between two cans to get the speed up..

GARS accepts commercial adverts where we voted out that venture years ago. Maybe due for review at board level to support the downsizing of the membership and club income. Too many old cats retired, bends in the kilts etc.. **K3GNM** lost forever etc..Major effort needed to get the age average down to 39 and **BBB** will never make it. We still have no offers to come clean out the barnyard of all the excess fertilizer generated faster in than out. Blame the bad advertising of this free great garden enhancement.

We sure miss the Southern Reporter as **SK**. Gil kept the news pot boiling. A recent substitute was the dexpedition od **W3RM** and **Mike** in their sojourn to the Grand Turks iles and over 4000 contacts in two weeks. **Jodie** certainly was great hostess with the 6 antennas and rigs all set up and ready to go. What an arm chair signal with her beam and 200 watts at Philadelphia and the world. Sall for now, FM.

Fcc Invites 60 Meter Petition

The FCC is accepting comments on the ARRL's petition seeking the allocation of 5.250 to 5.400 MHz to the Amateur Service on a domestic (US-only), secondary basis. The Commission put the proposal on public notice this week and assigned a rule making number, RM-10209, to the proceeding. Comments are due by September 12, 2001. Interested parties may comment on the proposal using the FCC's Electronic Comment Filing System (EFCS) <<http://www.fcc.gov/e-file/ecfs.html>. Commenters should reference "RM-10209" in their postings. Even if the FCC eventually okays the petition, it's likely to be several years before the new band actually becomes available. In its petition, the ARRL told the FCC that the new band would aid emergency communication activities by filling a "propagation gap" between 80 and 40 meters, particularly for emergency communications during hurricanes and severe weather emergencies. The ARRL also said a new 150-kHz allocation at 5 MHz also could relieve substantial overcrowding that periodically occurs on 80 and 40. The ARRL has proposed that General class and higher amateurs be permitted to operate CW, phone, data, image and RTTY on the new band running maximum authorized power. No mode-specific subbands were proposed. If allocated to the Amateur Service on a secondary basis, hams would have to avoid interfering with—and accept interference from—current occupants of the >spectrum, as they already do on 30 meters. The ARRL said that its successful **WA2XSY** experimental operation between 1999 and this year has demonstrated that amateur stations can coexist with current users and that the band is very suitable for US-to-Caribbean paths. A copy of the ARRL petition is available on the ARRL Web site, <http://www.arrl.org/announce/regulatory/5MHz>. **MARITIME NET "DELIVER"** **BABY TO SAILOR AT SEA** Thanks to Amateur Radio, a sailor aboard a US Navy destroyer at sea got to hear his newborn son's cries for the first time. On August 12, members of the Maritime Mobile Service Net, with cooperation of the Pacific Seafarers Net, put sailor **Mark McDonald** in touch with his wife, **Wendy**, in California, who was about to go into labor. The sailor later was able to chat

see Fcc on page 8

Fcc from page 7

with his wife and her mom and to listen to his son's crying. Terry Pipitone, KB1FMM, in Connecticut, got a front-row seat. He said the Net session started out in typical fashion on 14.300 MHz. It soon got interesting after Tom Lange, W4MDL, on McDonald's ship checked in seeking >help from anyone who could put the husband and wife in contact. When no West Coast stations were available, Pipitone made some calls to California, where—as it turned out—Wendy McDonald was headed for the hospital. As the Net's closing time neared, the proceedings shifted to the Pacific Seafarers Net on 14.313 MHz. While KB1FMM remained in contact with the hospital, ARRL member Tom Whelchel, WA6TLL, in California stepped in to provide a phone patch between the hospital and the ship—somewhere in the North Atlantic. As Pipitone tells it, things happened pretty fast after that. "At 0810 the baby was born and at 0815 Mark and his new son—Justin Alexander McDonald—were on the phone together," he said. "Mother and son were all doing fine, and the proud father was in tears. The timing and the >cooperation could not have been better." Listening in on the proceedings was Eric Boyle, N0YET, in Kansas, who reports Mark McDonald not only was able to speak with his wife and his mother-in-law but got to hear his baby crying for the first time. "This was neat!" he enthused. "It is times like this that make me extremely proud to be part of the Amateur Radio Community!" For more information on the Maritime Mobile Service Net, visit the Net's Web site <<http://www.mmsn.org/>>
* We've never heard this one before: ARRL staffers have heard a lot of >stories from members about how they became interested in Amateur Radio, but, as Assistant Circulation Manager Kathy Capodicasa, N1GZO, says, "We've never heard this one before!" As she relates the story, she spoke to a mom who had placed an order on behalf of her young son for Now You're Talking and ARRL's Tech Q&A. "When I asked her how her son found out about these titles, she informed me that they had been at the dump and her 11-year-old son started snooping around among the magazines and newspapers dropped off for recycling, and he came across the July issue of QST," Capodicasa said. "She told me that he hasn't been able to put it down since." Of course, an easier—and less messy—way to find out more about Amateur Radio is to visit the ARRL Web site and on-line catalog <<http://www.arrl.org/catalog/>>

SEMA from page 4

we know it. All you have to do is turn your air conditioner on to know that belt-driven accessories have a negative effect on power and fuel economy. When you add up internal friction, heat loss and accessory drain, fully 79 percent of the potential energy going into an engine never makes it out to the driveline. So a logical next step would be to embrace a beltless engine concept.

Where's the Belt? The beltless engine is exactly what the name implies. Most, if not all of the accessories currently parasitic on engine power would be driven, instead, by an alternate electronic system. However, the electricity has to come from somewhere, and such a setup immediately outstrips the capabilities of even the most robust of contemporary alternators.

Why 42 volts? First of all, to the consumer it will be perceived as 36 volts (just as today's 14-volt system is perceived as 12 volts), because that's the size the primary battery will be. Peak voltage in such a system would never exceed 58 volts, and that's the limiting number; 60 volts are established as a global maximum level for automotive applications, considering all safety aspects, including accidental shock hazard.

For at least an interim period the 42-volt core system would be supplemented by a 14-volt subsystem to run such things as light bulbs and small electronics, thus eliminating costly redesigns and retaining positive 14-volt attributes (such as the extension of filament life at lower voltages).

We're not there quite yet. As 42-volt systems are developed, there are a number of challenges that will have to be overcome:

- Roadside assistance • Electrical arcing • Power demand and control • Low voltage loads and isolation • Aftermarket load demands • Regulations and standards • Tools and equipment • Packaging

Knowing the ingenuity of our industry, it will happen. If the predictions prove correct, what will a typical top-of-the-line vehicle in 2005 look like? The typical upscale model car or light truck has an alternator directly driven by the engine, that produces a variable-frequency, variable-voltage output. From the alternator, a front-end converter creates two outputs: 25 kHz AC at 48 volts RMS for the main power bus and 12 volts DC for charging the battery. The AC/DC portion of the converter is bi-directional so the battery can supply essential loads when the key is off. The starter is still 12 volts and gets its power from the battery; the power-hungry electrically heated catalytic converter takes its power directly from the alternator.

To minimize wiring complexity, the AC main power bus feeds distribution boxes located throughout the vehicle. Each box is controlled by a separate data communication network that allows it to convert the AC bus voltage into the voltages needed by the loads served. For example, a distribution box near the trunk might provide appropriate voltages to the taillights, fuel pump, rear window defroster, retractable antenna and an audio system. Another distribution box in the passenger compartment might control door locks, windows, side-view mirrors, compartment lights and seat heaters. The details of the models of the future will, of course, vary, and some manufacturers may choose not to use AC distribution altogether, but they will be more power-hungry than today's already complex high-end automobiles, with their 1,500 wires, innumerable branch points, as many as three dozen microprocessors, and more than two dozen sensors.

www.somanews.com

S	M	T	W	Th	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Calendar for September 2001

1	Sat	
2	Sun	(2M net-K3XS) (75M net-W2AJV) (10M net - W3AA) Full Moon
3	Mon	Labor Day
4	Tues	
5	Wed	Board meeting at KB3IV's home . All are welcome
6	Thur	VE exams - doors close at 6:30 PM Code Practice-8pm
7	Fri	
8	Sat	
9	Sun	(2M net -KB3FHF) (75M net- WA3KIO) (10M net-W3AA)
10	Mon	
11	Tues	
12	Wed	General Meeting of PMRC starts at 7:30 PM at the Franklin Institute Refreshments at 7PM
13	Thur	Code Practice- 8pm
14	Fri	
15	Sat	
16	Sun	(2M net -KB3IV) (75M net - KB3IV) (10M net - W3AA)
17	Mon	New Moon
18	Tues	Rosh Hashanah
19	Wed	
20	Thur	Code practice - 8pm
21	Fri	
22	Sat	
23	Sun	(2M net - WB3KOJ) (75M net- NG3P) (10M net- W3AA)
24	Mon	
25	Tues	
26	Wed	
27	Thur	Code practice - 8pm Yom Kippur
28	Fri	
29	Sat	
30	Sun	(2M net - W3BBB) (75M net - W3BBB) (10M net - W3AA)
31	Mon	

Activities for September 2001

Net Control stations should read the following announcements before asking if there are any more announcements for the Net

September 5— Ve test session

September 12 — General Meeting. Passing out material for MS 150 and report by W3RM and N3MT on their DX pedition

October 10 — Board meeting and General Meeting at the Franklin Institute

"DON'T TAILGATE... WAIT"—for the courtesy !

HARRIS* T189252007 1701 03 09/05/01
HARING-JOHNSON
103 N HARBOR RD
SAINT MICHAELS MD 21663-2910

JACK HARING
VIRGINIA HARING - W3IIM
2113 Edgehill Drive
Furlong
PA 18925-1101
W3IIM
R

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c/o 641 Kismet Road, Philadelphia, PA 19115-1114

The Blue

